

PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q83945

Yuko TACHIBANA, et al.

Appln. No.: 10/510,031

Group Art Unit: Not Yet Assigned

Confirmation No.: Not Yet Assigned

Examiner: Not Yet Assigned

Filed: October 1, 2004

For: CABLE, AND CABLE CONNECTION METHOD AND CABLE WELDING DEVICE
THEREFOR

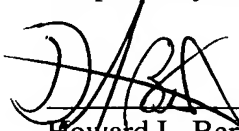
**SUBMISSION OF INTERNATIONAL PRELIMINARY
EXAMINATION REPORT (IPER)**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

For the Examiner's convenience, enclosed herewith is a copy of the English translation of the International Preliminary Examination Report (IPER). It is assumed that copies of the cited references as required by §371(c) will be supplied directly by the International Bureau, but if further copies are needed, the undersigned will undertake to provide them upon request.

Respectfully submitted,



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WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: December 9, 2004

Translation

PATENT COOPERATION TREATY

PCT/JP2003/004232

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| | | |
|---|--|--|
| Applicant's or agent's file reference JFKR-55-PCT | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/JP2003/004232 | International filing date (day/month/year) 02 April 2003 (02.04.2003) | Priority date (day/month/year) 04 April 2002 (04.04.2002) |
| International Patent Classification (IPC) or national classification and IPC H01R 43/02, 4/02, H01B 7/00, B23K 11/00 | | |
| Applicant FUJIKURA LTD. | | |

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|--|
| 1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. |
| 2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of _____ sheets. |
| 3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input checked="" type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input checked="" type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application |

| | |
|--|---|
| Date of submission of the demand 30 September 2003 (30.09.2003) | Date of completion of this report 01 April 2004 (01.04.2004) |
| Name and mailing address of the IPEA/JP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

PCT/JP2003/004232

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP03/04232

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☒ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

Claims 1-12 relate to a cable connection method, cables and a cable welder, wherein welding extending in the longitudinal direction of the conductor is carried out by means of a pair of electrodes separated from each other in the longitudinal direction.

Claims 13-17 relate to a cable comprising a plurality of core wire conductors that are respectively connected to a plurality of contacts.

These two groups of inventions are not found to be one invention group so related as to form a single general inventive concept.

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
- ☐ the parts relating to claims Nos. _____

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|------|-----|
| Novelty (N) | Claims | 1-17 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | | YES |
| | Claims | 1-17 | NO |
| Industrial applicability (IA) | Claims | 1-17 | YES |
| | Claims | | NO |

2. Citations and explanations

- Document 1: JP, 10-80777, A (Siemens AG.), March 31, 1998 (03.31.98)
 Document 2: JP, 2-132783, A (Toshiba Corporation), May 22, 1990 (05.22.90)
 Document 3: JP, 60-50079, B2 (Tanaka Kikinzoku Kogyo K.K., Tanaka Chemical K.K.), November 6, 1985 (11.06.85)
 Document 4: JP, 9-161936, A (Yazaki Corporation), June 20, 1997 (06.20.97)
 Document 5: JP, 7-153519, A (The Witaka Corporation), June 16, 1995 (06.16.95)
 Document 6: JP, 11-354215, A (Matsushita Electric Works, Ltd.), December 24, 1999 (12.24.99)

The inventions of claims 1, 2, 4, 5, 7 and 9 do not appear to involve an inventive step over documents 1 and 2 cited in the ISR. Document 1 describes art for welding tabular metal conductors (15, 17 and 21) by means of a pair of electrodes (7 and 9) separated from each other in the longitudinal direction of the conductors. Document 2 describes art for press welding tabular electrodes (4a' and 4b') while applying a load. When welding in this way, considering formation of region (5), a discolored part being formed as appropriate would be obvious to a person skilled in the art.

The inventions of claims 3, 6, 8 and 10 do not appear to involve an inventive step over document 1 and document 3 cited in the ISR. Document 3 (3rd column, lines 9-12), suggests that Au works as a brazing filler metal to form an alloy layer.

The inventions of claims 11 and 12 do not involve an inventive step over document 1 and document 4 cited in the ISR. The second embodiment described in document 4 relates to a welding device that causes a pair of electrodes (8 and 9) to move and come in contact with a connector.

The inventions of claims 13-17 do not appear to involve an inventive step over documents 5 and 6 cited in the ISR. Document 5 (paragraph [0024]) and document 6 (paragraph [0030]) describe the point that a core wire conductor of a cable and a connector are welded and connected to each other.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Application No.

PCT/JP03/04232

VI. Certain documents cited

1. Certain published documents (Rule 70.10)

| Application No. Patent No. | Publication date (day/month/year) | Filing date (day/month/year) | Priority date (valid claim) (day/month/year) |
|-------------------------------|--------------------------------------|---------------------------------|---|
| JP 2003-109708 A [EX] | 11.04.03 | 28.09.01 | |

2. Non-written disclosures (Rule 70.9)

| Kind of non-written disclosure | Date of non-written disclosure (day/month/year) | Date of written disclosure referring to non-written disclosure (day/month/year) |
|--------------------------------|--|---|
| | | |